

REMARKS

In the December 18, 2003 Office Action, the Examiner noted that claims 1-10 were pending in the application and were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent Application Publication 2001/0034737 to Cane et al. which corresponds to U.S. Patent 6,629,110 and claims priority under 35 U.S.C. § 119(e) to provisional patent application Serial No. 60/175,285 filed January 10, 2000. Claims 1-10 remain in the case. The Examiner's rejections are traversed below.

Newly Cited Prior Art: U.S. Patent Application Publication 2001/0034737 to Cane et al.

The Cane et al. patent application publication is directed to administration of a differential backup system in a client-server environment. The "differential backup system stores the entire file on the first save, and only the incremental or differential changes to the file in subsequent operations" (paragraph 29, lines 3-5). In addition, "one of the servers 102 or 110 is selected as the main backup site for the data storage, and the other server is selected to be a mirror site" (paragraph 30, lines 2-4). For example, "server 102 receives the file data marked for archival backup storage ... store[s] the entire file on the first memory device 106 and provide[s] a copy of the entire file to the mirror server 110 ... [which] stores the entire file on the first memory device 114" (paragraph 31, lines 1-7). When changes are made, "only the incremental differential changes will be stored on memory device 106 ... [and] memory device 114" (paragraph 32, lines 1-5). Disk databases 104 and 112 are maintained by servers 102 and 110, respectively with data, such as "file name 212, the date the file was stored 214, the tape identifier 216, the file type 218, and miscellaneous data 220" (paragraph 33, last three lines) as illustrated in Fig. 2B, to enable access to the archival data.

Rejections under 35 U.S.C. § 102(e)

In item 3 on pages 2-3 of the Office Action, claims 1-10 were rejected under 35 U.S.C. § 102(e) as anticipated by Cane et al. As described above, Cane et al. discloses a differential backup system that includes mirroring of the backup. Attached as Exhibit A are the definitions of "mirroring" and "RAID" which is referenced in the definition of "mirroring". Although few details are provided of how the mirroring is accomplished in the system disclosed by Cane et al., it is apparently performed **automatically**, similar to the redundant operation of a RAID with the difference that is performed at a higher level by multiple servers, rather than a data storage device like a RAID.

The independent claims have been amended to recite that the "single original file should be saved in response to a request from a user to save multiple copies of the single original file" (e.g., claim 1, lines 3-4). As indicated on pages 14 and 15 of the subject application, the present invention is directed to a saving operation performed by a user who selects, e.g., "PLURAL SAVING" (Fig. 8). There is no suggestion in Cane et al. that the saving of multiple copies is under user control at the time that the copies are being made. Such capability requires a user interface that offers the option illustrated in Fig. 8.

There are several benefits provided by the present invention compared to the system disclosed by Cane et al. First, it is not limited to an operation performed when archiving data. Systems that provide such archiving capability, are typically fairly large scaled systems as indicated by the use of multiple servers. The present invention could be implemented on a wide range of systems, including a personal computer, to easily provide multiple copies when any file is saved, not solely when a file is archived. Furthermore, the amount of storage required is significantly reduced, since the user has control over which files are saved as multiple copies at the time that the file is saved. Thus, the "PLURAL SAVINGS" option could be used only for particularly important files. In smaller scale systems, selectivity of files to be saved is more likely to be a desirable option, although any system can become storage limited if all copies of the file are made on non-removable media.

For the above reasons, it is submitted that claims 1-10 patentably distinguish over Cane et al. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 5/18/05

By: Richard A. Gollhofer
Richard A. Gollhofer
Registration No. 31,106

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501



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EXHIBIT A

mirror image *n.* An image that is an exact duplicate of the original with the exception that one dimension is reversed. For example, a right-pointing arrow and a left-pointing arrow of the same size and shape are mirror images.

mirroring *n.* 1. In computer graphics, the ability to display a mirror image of a graphic—a duplicate rotated or reflected relative to some reference such as an axis of symmetry. See the illustration. 2. In a network, a means of protecting data on a network by duplicating it, in its entirety, on a second disk. Mirroring is one strategy implemented in RAID security. 3. On the Internet, replicating a Web site or FTP site on another server. A site is often mirrored if it is frequently visited by multiple users. This eases the network traffic to the site, making it easier for users to gain access to the information or files on it. A site may also be mirrored in different geographic locations to facilitate downloading by users in various areas. *See also* RAID.

mirror site *n.* A file server that contains a duplicate set of files to the set on a popular server. Mirror sites exist to spread the distribution burden over more than one server or to eliminate the need to use high-demand international circuits.

MIS *n.* *See* IS.

misc. newsgroups *n.* Usenet newsgroups that are part of the misc. hierarchy and have the prefix misc. These newsgroups cover topics that do not fit into the other standard Usenet hierarchies (comp., news., rec., sci., soc., talk.). *See also* newsgroup, traditional newsgroup hierarchy, Usenet.

mission critical *adj.* Pertaining to information, equipment, or other assets of a business or project that are essential to the successful operation of the organization. For example, accounting data and customer records are often mission critical information.

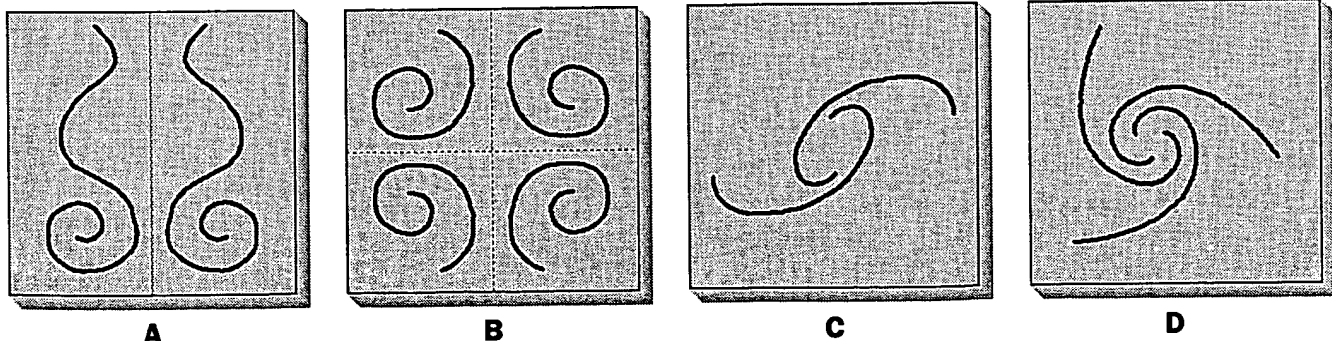
mixed cell reference *n.* In spreadsheets, a cell reference (the address of a cell needed to solve a formula) in which either the row or the column is relative (automatically changed when the formula is copied or moved to another cell) while the other is absolute (not changed when the formula is copied or moved). *See also* cell (definition 1).

MMU *n.* *See* memory management unit.

MMX *n.* Short for **Multimedia Extensions**. An enhancement to the architecture of Intel Pentium processors that improves the performance of multimedia and communications applications.

mnemonic \nē-mon'ik\ *n.* A word, rhyme, or other memory aid used to associate a complex or lengthy set of information with something that is simple and easy to remember. Mnemonics are widely used in computing. Programming languages other than machine language, for example, are known as *symbolic languages* because they use short mnemonics, such as *ADD* (for *addition*) and *def* (for *define*) to represent instructions and operations. Similarly, operating systems and applications based on typed commands use mnemonics to represent instructions to the program. MS-DOS, for example, uses *dir* (for *directory*) to request a list of files.

MNP10 *n.* Short for **Microcom Networking Protocol, Class 10**. An industry-standard communication pro-

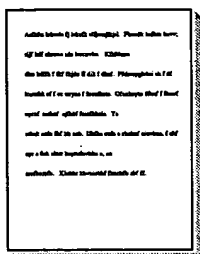


Mirroring. (A) Twofold symmetry with vertical axis; (B) fourfold symmetry with vertical and horizontal axes; (C) twofold radial symmetry; (D) threefold radial symmetry.

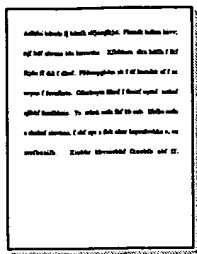
line. As the signal quality improves or deteriorates while a transmission line is being used, the transmission speed is adjusted accordingly. *See also* ADSL, xDSL.

rag *n.* Irregularity along the left or right edge of a set of lines of text on a printed page. Rag complements justification, in which one or both edges of the text form a straight vertical line. *See the illustration. See also* justify, ragged left, ragged right.

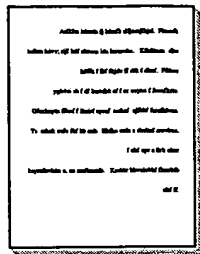
Ragged right



Justified



Ragged left



Rag.

ragged left *adj.* Of, relating to, or being lines of text whose left ends are not vertically aligned but form an irregular edge. Text may be right-justified and have a ragged left margin. Ragged-left text is used infrequently—typically, for visual effect in advertisements. *See also* rag, right-justify.

ragged right *adj.* Of, relating to, or being lines of text whose right ends are not vertically aligned but form an irregular edge. Letters and other word-processed documents are commonly left-justified, with ragged-right margins. *See also* left-justify, rag.

RAID \rād\ *n.* Acronym for **redundant array of independent disks** (formerly called **redundant array of inexpensive disks**). A data storage method in which data, along with information used for error correction, such as parity bits or Hamming codes, is distributed among two or more hard disks in order to improve performance and reliability. The hard disk array is governed by array management software and a disk controller, which handles the error correction. RAID is generally used on network servers. Several defined levels of RAID offer differing trade-offs among access speed, reliability, and cost. *See also* disk controller, error-correction coding, Hamming code, hard disk, parity bit, server (definition 1).

RAID array \rād'ə-rā\ *n.* *See* RAID.

RAM \ram\ *n.* Acronym for **random access memory**. Semiconductor-based memory that can be read and written by the central processing unit (CPU) or other

hardware devices. The storage locations can be accessed in any order. Note that the various types of ROM memory are capable of random access but cannot be written to. The term **RAM**, however, is generally understood to refer to volatile memory that can be written to as well as read. *Compare* core, EPROM, flash memory, PROM, ROM (definition 2).

RAMAC \ram'ak\ *n.* 1. Acronym for **Random Access Method of Accounting Control**. Developed by an IBM team led by Reynold B. Johnson, RAMAC was the first computer disk drive. It was introduced in 1956. The original RAMAC consisted of a stack of 50 24-inch platters, with a storage capacity of five megabytes and an average access time of one second. 2. A high-speed, high-capacity disk storage system introduced by IBM in 1994. Based on the original RAMAC storage device, it was designed to fulfill enterprise requirements for efficient and fault-tolerant storage.

RAM cache \ram'kash\ *n.* Short for **random access memory cache**. Cache memory that is used by the system to store and retrieve data from the RAM. Frequently accessed segments of data may be stored in the cache for quicker access compared with secondary storage devices such as disks. *See also* cache, RAM.

RAM card *n.* Short for **random access memory card**. An add-in circuit board containing RAM memory and the interface logic necessary to decode memory addresses.

RAM cartridge *n.* *See* memory cartridge.

RAM chip *n.* Short for **random access memory chip**. A semiconductor storage device. RAM chips can be either dynamic or static memory. *See also* dynamic RAM, RAM, static RAM.

RAM compression *n.* Short for **random access memory compression**. This technology was an attempt by a number of software vendors to solve the problem of running out of global memory under Windows 3.x. Compression of the usual contents of RAM may lessen the system's need to read or write to virtual (hard disk-based) memory and thus speed up the system, as virtual memory is much slower than physical RAM. Because of the falling prices of RAM and the introduction of operating systems that handle RAM more efficiently, such as Windows 9x, Windows NT, and OS/2, RAM compression is generally used only on older PCs. *See also* compression, RAM, Windows.